SERIES 2™

RW COMPATIBLE

Installation Guide

Pioneer

sound. vision. soul

Register your Recorder at *www.pioneerelectronics.com*

Pioneer DVD Recorder with TiVo®

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Compatibility of this unit with progressive-scan TVs:

This player is compatible with progressive video Macrovision System Copy Guard.

CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED THAT THE USER SWITCH THE CONNECTION TO THE "STANDARD DEFINITION" OUTPUT. IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 525p DVD PLAYER, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER.

This player is compatible with the following Pioneer displays and monitors: PDP-5030HD, PRO-1000HD, PRO-800HD, PDP4330HD, PRO-720HD, PRO-620HD, PRO-520HD, SD-643HDS, SD-533HDS, PDP-503HDG, PDP-433HDG.

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CHAPTER 1

Getting Started

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▶▶ FCC NOTE: Federal Communications Rule

Part 68—Equipment Statement;

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear panel of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by the ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment, the Pioneer DVD Recorder with TiVo, causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, the Pioneer DVD Recorder with TiVo, for repair or warranty information, please contact the Customer Service Hotline at 1-800-421-1404. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment, the Pioneer DVD Recorder with TiVo, does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

According to the FCC's electrical safety advisory, we recommend that you may install an AC surge arrestor connected. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources and that this is a major, nationwide problem.

Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level	Example
30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet.
THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE	
90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation.

S001A_en

Remember, always connect cables from the OUT connector of one device to the IN connector of the next. Never connect an IN to an IN or an OUT to an OUT.

Using This Guide

Step 1: Understanding the basics

TVs used to be so simple: no color, no digital video, no stereo sound, no choices. All you needed was an antenna and a TV. The antenna captured audio and video signals. A wire, connected from the antenna to the TV, brought these signals to your TV as sounds and pictures.

As TVs have acquired more features, and new devices have been created to work with your TV, it may seem that everything has become more complex. You may have a VCR, an A/V receiver, and a game system connected to your TV, in addition to your Pioneer DVD Recorder with TiVo® (referred to in this guide as the Recorder). However, one thing has remained the same: you still need to get the sounds and pictures from their source (your antenna, or your cable or satellite service) to your TV.

You get the sounds and pictures to your TV by using cables. These make a path over which the pictures and sounds travel to your TV. The choice of cables may seem overwhelming, but they all perform the same function: they transfer sounds and pictures to your TV at varying levels of quality.

All of your equipment has connectors, or places where cables can be connected. Some connectors are labeled “In” and some are labeled “Out.” The pictures and sounds enter a piece of equipment through an IN connector and leave through an OUT connector.

When you connect your Recorder to your TV and other audio/video (A/V) equipment, you are simply creating a path that starts at the wall, or your cable or satellite box, and goes in (through IN connectors) and out (through OUT connectors) of your equipment until it reaches your TV.

Step 2: Finding your setup example

This guide provides specific examples of connecting the Recorder to an existing antenna, cable, or satellite system and other A/V equipment. Choose your setup example from the ones below:

You use either antenna or cable without a cable box. You may also have a VCR.	**Setup 1: Antenna or Cable (No Cable Box)**	p. 14
You have either a cable box or satellite receiver (if you have both, see Setup 6 instead). You may also have a VCR.	**Setup 2: Cable Box or Satellite Receiver**	p. 16
You use either antenna or cable and want to watch one channel while recording another.	**Setup 3: Watching One Channel While Recording Another**	p. 20
You have both a satellite box and antenna, or both a satellite box and cable without a cable box. (Upgrade to TiVo Plus service required.)	**Setup 4: Both a Satellite Box and an RF Program Source**	p. 22
You have both a cable box and a satellite receiver. (Upgrade to TiVo Plus service required.)	**Setup 5: Both a Cable Box and a Satellite Receiver**	p. 24
You have an advanced home entertainment system with several components.	**Setup 6: Cable or Satellite Box, A/V Receiver, and Game Console**	p. 26

What's next?

Connect a VCR or video camera, so you can turn your home videos into DVDs! See page 29 for instructions.

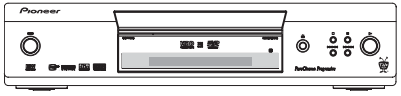
After connecting your Recorder, the last step is to complete Guided Setup; see Chapter 1 in the *User's Guide* for details. You must complete Guided Setup before you can play and record DVDs.

The Recorder is not designed to support a heavy load, such as a TV. Your Recorder is only capable of supporting the weight of one or two common A/V components such as VCRs, DVD players, or A/V receivers (provided they have four good, broad, padded feet that distribute the weight near the corners of the Recorder).

Also, avoid stacking your Recorder on top of other electronic components—such as DVD players, A/V receivers—or the vents of your TV.

▶▶ Cables and Accessories

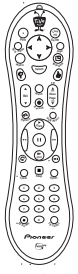
1. These are the basics:



Recorder

Power Cord

Phone Line Splitter

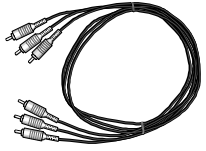


Remote Control

25' Phone Cord

RF Coaxial cable

2. See page 7 to choose audio and video cables:



Composite A/V cables

S-Video cable (not supplied)

Component Video cable (not supplied)

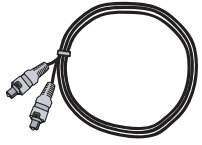
3. If you have a DIRECTV satellite receiver with a 9-pin Data connector, or a Motorola/GI DCT2000 series cable box, use this cable:

Serial (Data) Control cable*

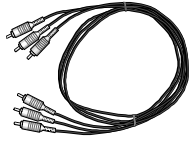
If you can't use the Serial Control cable above with your satellite receiver or cable box, use this cable instead:

IR Control cable*

4. You may want to purchase these additional cables for some setups:



Optical Digital Audio cable



Component Video cable

S-Video cable

*See page 9 for more information and tips about Serial and IR Control.

Choosing audio and video cables

The Recorder comes with a **Composite A/V** cable (❶). Composite A/V cables have three ends, two (white and red) for L/R audio, and one (yellow) for video. Composite A/V cables provide excellent audio and video, and you can connect the Recorder to a TV or A/V receiver using only this cable. All of the setup diagrams in this book and the Start Here booklet show connections using a Composite A/V cable.

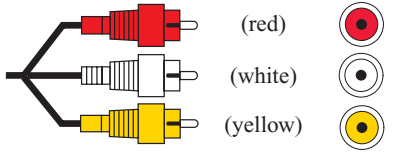
The Recorder's back panel also includes premium connectors for **S-Video** (❷) and **Component Video** cables (❸), and for a **Digital Audio** cable (❹). If you want the best quality audio and video available and you have high end equipment that supports these connections, you may want to purchase these additional cables to use instead of the Composite A/V cables shown in the setup diagrams.

Premium Video. The Recorder's premium video connectors are S-Video input and output, and component video output. S-Video provides a higher quality signal than composite, and component video is better still, providing the highest quality video signal generally available in consumer electronics.

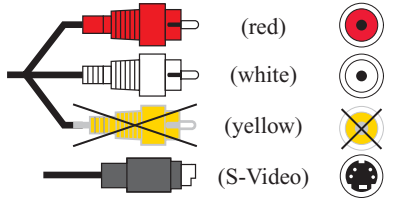
Premium Audio. The Recorder's premium audio connector is an optical digital audio output. Using digital audio can make a difference if you are watching DVDs with DTS (Digital Theater Systems™) audio and you have an A/V receiver with a DTS decoder, or you are watching DVDs with Dolby Digital™ audio. Use it if your A/V receiver supports it and you want the best DVD audio signal available. See the *User's Guide* for instructions on selecting the appropriate audio settings when using this cable.

You can use any combination of audio and video connectors (for example, composite audio with S-Video, as in figure ❷, or digital audio with component video).

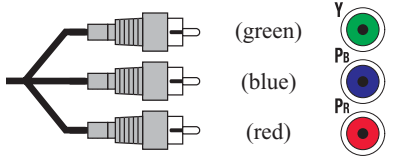
❶ **Composite A/V Cable and Jacks**



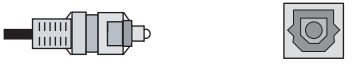
❷ **Composite L/R Audio with S-Video cable**



❸ **Component Video Cable and Jacks**



❹ **Optical Digital Audio Cable and Jack**



▶▶ Connecting to the Phone Line

You don't need to install a new phone jack or phone number—simply use the phone line you already have. The following information applies to all setups described in this guide:

- **Phone line.** Almost every household phone line is a standard analog line, which is what the Recorder requires to complete Guided Setup. Do not connect the Recorder to a digital PBX phone system (these allow many phones to share a single telephone number and are usually used in hotels and office buildings). Doing so may permanently damage your Recorder's modem and will void your warranty.
- **Phone jack.** If the phone jack isn't close to the Recorder, you can use the 25-foot phone cord that comes with the Recorder to connect it to a phone jack. Phone cords longer than 25 feet are readily available at most hardware or electronics stores.

  Your cable or satellite box may require a connection to your phone line, too. To connect both the Recorder and your cable or satellite box to the same phone jack, plug the provided phone line splitter into the phone jack.

After you complete Guided Setup, you will be able to connect your Recorder to a home network and use a shared broadband Internet connection instead of a phone line to make connections to the TiVo service. See Chapter 8, "Connecting to a Home Network," in the *User's Guide*.

If you don't have a home network with a shared broadband Internet connection, the Recorder must use a standard phone line to connect to the TiVo service. We recommend leaving the phone cord plugged in continuously in order to keep your Recorder's program information up to date.

▶▶ Using Your Recorder with a Cable or Satellite Box

Your Recorder needs to be able to change channels in order to record programs and display live TV. If you are using a cable or satellite box, the Recorder sends it signals to change the channel using either an IR (infrared) or a Serial (data) Control cable. (If you use antenna or cable without a cable box, the Recorder does not need a Control cable to change channels.)

After setting up your Recorder, including the Control cable connection, change channels with your Recorder's remote control only.

Serial/Data Control

You can use the Serial Control cable for channel changing if:

- You have a DIRECTV satellite receiver with a 9-pin data connector like this:
- You have a Motorola/General Instruments DCT2000 series cable box, and your cable provider has enabled it for serial control.

Serial Control Cable

Otherwise, use the IR Control cable (described on the next page).

Some DIRECTV satellite receivers have alternative connections that you may be able to try. You will need to purchase an additional cable or accessory (available from *www.tivo.com/store*) for these types of connections:

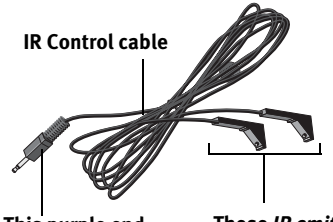
- If your DIRECTV satellite receiver has a 15-pin connector like this: you can connect the Serial Control cable by using a 15-pin adapter.

15-pin adapter (not included)

- Some satellite receivers for the DIRECTV service have a **Home Control** connector like this: (similar to a phone jack, but slightly smaller).

  Home Control is the fastest and most reliable form of Control cable connection. To connect the Home Control cable, plug one end of the cable into the **Home Control** jack on your DIRECTV satellite receiver. This connector is sometimes labeled "Low Speed Data." (Don't try to connect a **Home Control** cable to the satellite receiver's phone jack.) Plug the other end into the **Channel Change/Serial** jack on the Recorder.

Home Control cable (not included)


IR Control cable
This purple end plugs into your Recorder.
These *IR emitters* send signals to the *IR sensor* on your cable or satellite box.

The small "bulbs" on the *IR emitters* do not visibly light up when they send an IR signal. If you find that channels are not changing, see page 44 for troubleshooting help. If channels change unreliably or inconsistently, try the tips on optimizing the IR Control connection (to the right).

IR (Infrared) Control

Finding the IR sensor. To correctly position the IR Control cable, you need to find your cable box or satellite box's IR sensor (the connection is fully described in the examples in Chapters 2 and 3). To locate the IR sensor, look for a tiny round bulb behind the dark, translucent plastic "window"—the IR window—on the front of your cable or satellite box. A flashlight might help you see it. Position the IR emitters so they are centered on the IR sensor and stick out about 1.5 inches.

Choosing an IR code in Guided Setup. After setting up your Recorder, you'll complete Guided Setup (see the *User's Guide* for more information). During Guided Setup, you'll be asked to test and select an IR code. Each IR code signals a particular cable or satellite box model to change channels. If none of the codes changes the channel on your particular cable or satellite box, see page 44 for troubleshooting tips. If you find a code or codes that work, but none of the codes is reliable or consistent, try optimizing the IR Control connection (see below).

Optimizing the IR Control connection. The IR Control cable works better if its emitters and the IR window on the cable or satellite box are shaded from other infrared signals. You can create an IR cover to decrease the interference from other signals. This solution may help if changing channels with an IR Control cable is unreliable or inconsistent, but not if channels don't change at all.

Test whether an IR cover might be effective simply by draping a magazine, a towel, or a dark cloth over the front of cable or satellite box, including the IR emitters. (See the diagram on page 11.) Do not block the Recorder's IR window. Try changing channels several times with the remote control. If channels change more reliably this way, you may want to make an IR cover.

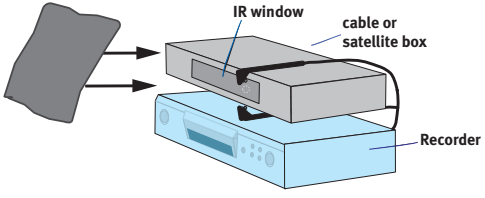
The exact methods and materials you use to build the IR cover will depend on the shape of your cable or satellite box's IR window and the materials you have available. However, the general procedure described below will guide you.

1. Cover the area around the IR emitters and the cable or satellite box's IR window with a piece of thick fabric, such as black flannel. You could create a cover using cardboard or opaque tape instead. The important point is that the material you use fits snugly over the area around the translucent IR window and the IR Control cable's emitters.

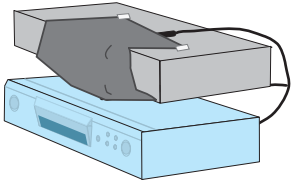
   If possible, cover the entire IR window on the cable or satellite box, because signal interference can enter from anywhere in the window. For some cable and satellite boxes, covering the entire IR window will include covering the controls on the front. In that case, you won't be able to use the controls, nor will you be able to control the cable or satellite box with its remote. However, we recommend using only your Recorder remote control to change the channel. If you still need to access your cable or satellite box, use materials that are relatively easy to remove.

2. Secure the cloth, tape, or other material (with tape or by another method), making sure that it fits closely around the IR window and the IR Control cable's emitters.

1. Place a piece of opaque material—for example, cloth or tape—over the IR emitters (shown on opposite page) and the IR window of the cable or satellite box.



2. Secure the material, making sure that it fits snugly.



CHAPTER 2

Common Setup Examples

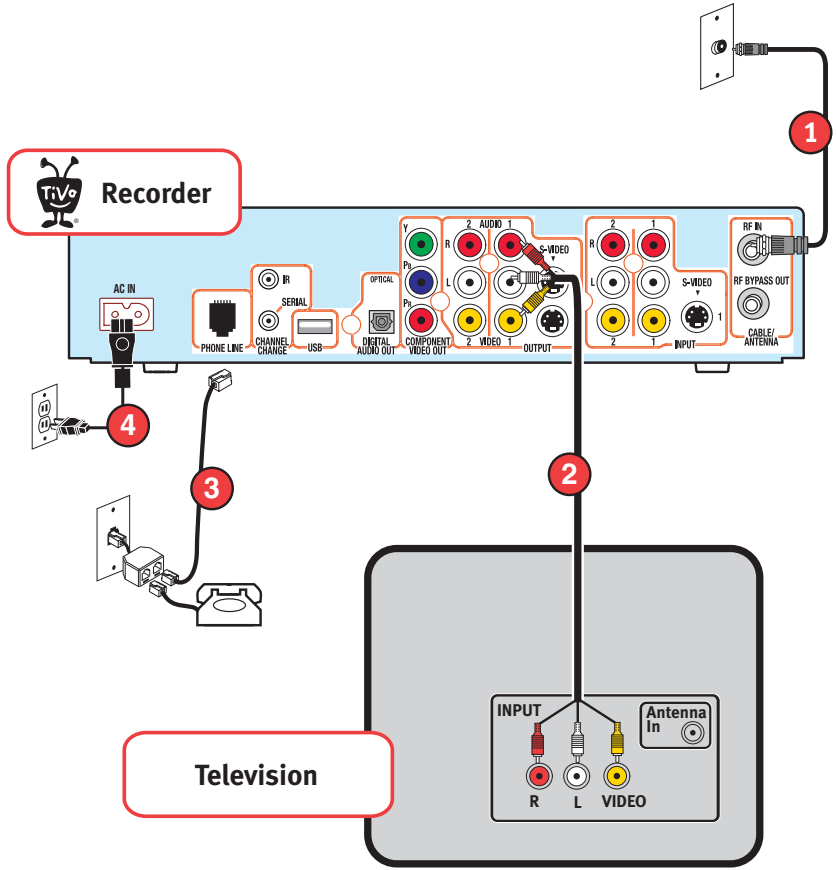
Setup 1: Antenna or Cable (No Cable Box) **14**

Setup 2: Cable Box or Satellite Receiver **16**

Setup 1: Antenna or Cable (No Cable Box)

Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables instead. See page 7.



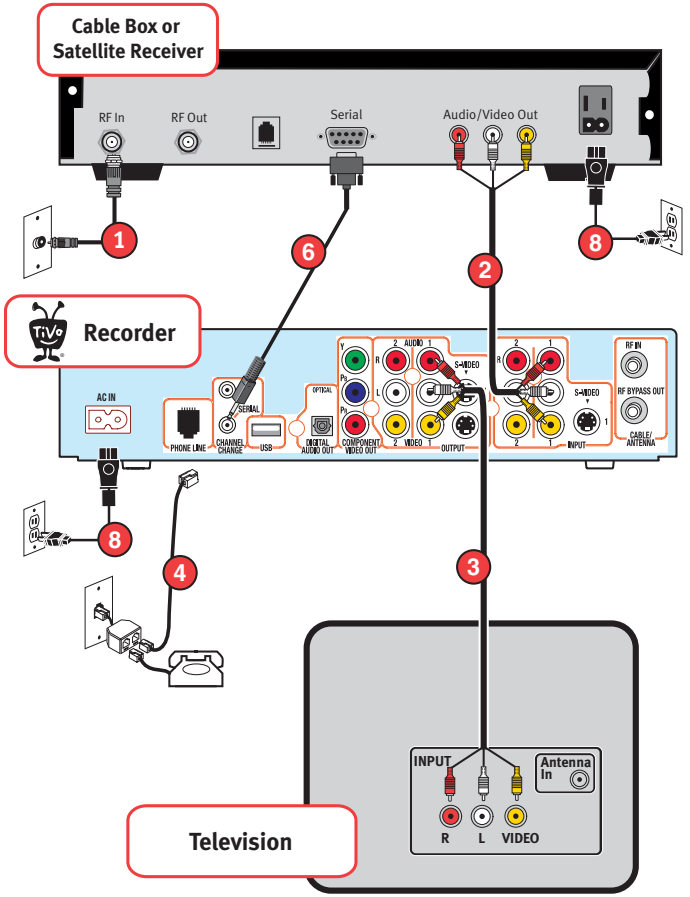
To add a VCR, see page 29. To add a game console, use the audio/video cable that came with your game console to connect from the audio/video output on the game console to an audio/video input on the TV. You do not need to connect your game console to your Recorder.

1. Connect the RF Coaxial cable currently coming from the wall to the connector labeled **RF In** on the Pioneer DVD Recorder with TiVo.
2. Connect the Composite A/V cable from the **Audio/Video Output 1** connectors on the Recorder to the **Audio/Video Input** connectors on the TV.
3. Connect a phone line (see page 8 for help). After you complete Guided Setup (see step 6 below), you'll be able to connect your Recorder to a home network and use a shared broadband Internet connection instead of a phone line to connect to the TiVo service. See Chapter 8, "Connecting to a Home Network," in the *User's Guide*.
4. Plug in all power cords.
5. Turn on your TV. If you do not see the Welcome screen displayed, use the Input, Source, or TV/Video button on your TV to select the correct audio/video source. Press the button until the Welcome screen is displayed. (For more help, see page 42.)
6. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details). You must complete Guided Setup before you can play and record DVDs.

Setup 2: Cable Box or Satellite Receiver

Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables instead. See page 7.

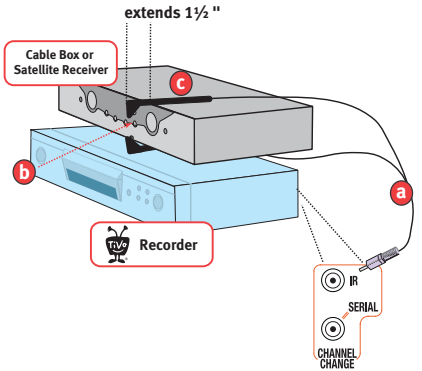


To add a VCR, see page 29. To add a game console, use the audio/video cable that came with your game console to connect from the audio/video output on the game console to an audio/video input on the TV. You do not need to connect your game console to your Recorder.

1. Check that the cable from the wall is connected to the cable or satellite box.
2. Connect the Composite A/V cable from the **Audio/Video Output** connectors on the cable or satellite box to the **Audio/Video Input 1** connectors on the Recorder.
3. Connect the Composite A/V cable from the **Audio/Video Output 1** connectors on the Recorder to the **Audio/Video Input** connectors on the TV.
4. Connect a phone line (see page 8 for help). After you complete Guided Setup (see step 10 below), you'll be able to connect your Recorder to a home network and use a shared broadband Internet connection instead of a phone line to connect to the TiVo service. See Chapter 8, "Connecting to a Home Network," in the *User's Guide*.
5. Select a channel changing Control cable (see page 9 for help). You can use the Serial Control cable if you have a DIRECTV satellite receiver with a 9-pin data connector, or a Motorola/General Instruments DCT2000 series cable box. If you choose the Serial Control cable, continue with step 6. For any other satellite receiver or cable box, choose the IR Control cable and skip to step 7.
6. Connect the Serial Control cable. Plug one end of the Serial Control cable into the Data connector on the satellite receiver or cable box. Plug the other end into the **Channel Change/Serial** connector (the lower mini-jack) on the Recorder. Then skip to step 10.
7. Connect the IR Control cable. (Skip this step if you completed step 6 above.)
   (a) Plug the purple end of the IR Control cable into the **Channel Change/IR** connector (the upper mini-jack) on the Recorder. **(b)** Locate the IR sensor (see page 9 for help). **(c)** Mount the IR emitters. Place one emitter on top of the cable box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)

For tips on the IR Control cable connection, see page 10.

IR Control cable connection



8. Plug in all power cords.
9. Turn on your TV. If you do not see the Welcome screen displayed, use the Input, Source, or TV/Video button on your TV to select the correct audio/video source. Press the button until the Welcome screen is displayed. (For more help, see page 42).
10. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details). You must complete Guided Setup before you can play and record DVDs.

CHAPTER 3

Additional Setup Examples

Setup 3: Watching One Channel While Recording Another 20

Setup 4: Both a Satellite Box and an RF Program Source 22

Setup 5: Both a Cable Box and a Satellite Receiver 24

Setup 6: Cable or Satellite Box, A/V Receiver, and Game Console 26

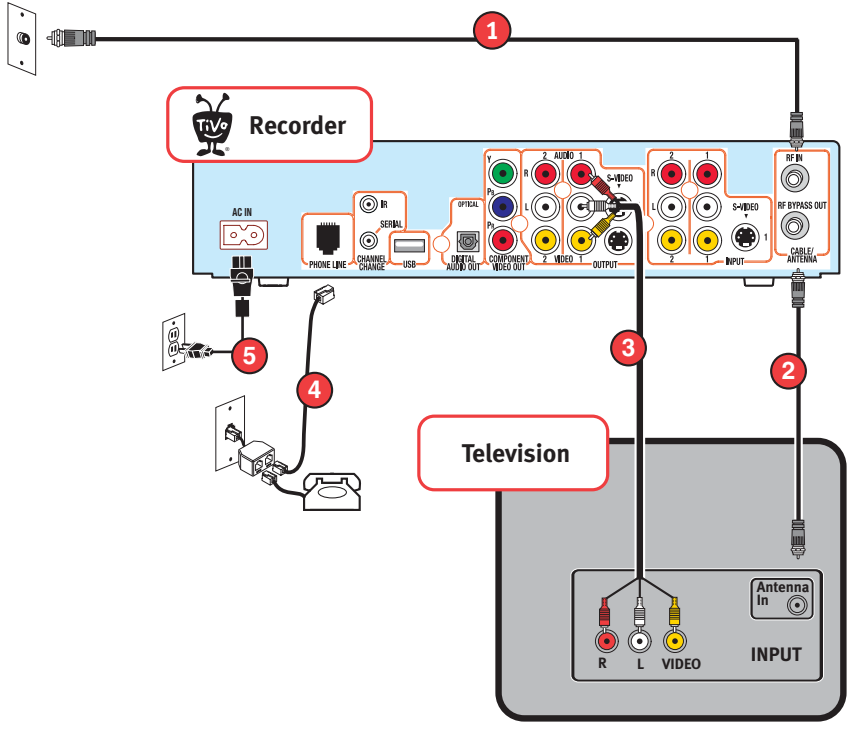
Connecting a VCR or a Video Camera 29

Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables instead. See page 7.

To add a VCR or a video camera, see page 29.

▶▶ Setup 3: Watching One Channel While Recording Another



Use this setup if you have antenna or cable without a cable box.

1. Connect the RF Coaxial cable coming out of the wall to the **RF In** connector on the Pioneer DVD Recorder with TiVo.
2. Connect an RF Coaxial cable from the **RF Bypass Out** connector on the Recorder to the **Antenna/RF In** connector on the TV.
3. Connect a Composite A/V cable from the **Audio/Video Output 1** connectors on the Recorder to the **Audio/Video Input** connectors on the TV.
4. Connect a phone line (see page 8 for help).
5. Plug in all power cords.
6. Turn on your TV. If you see the Welcome screen, you're ready for the next step, below. If not, you need to find the correct input settings by pressing the Input, Source, or TV/Video button on your TV's remote control until you see the Welcome screen. For more help, see page 42.
7. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details). You must complete Guided Setup before you can play and record DVDs.

To watch one channel while the Recorder records another, press the Input, Source, or TV/Video button on your TV to select the **Antenna/RF In** input. You should see live TV instead of TiVo screens. Use your TV's remote to change the channel. Keep in mind that there is no TiVo service functionality on any video signal coming from the Recorder's **RF Bypass Out** jack, so you will not be able to pause or rewind live TV while you are watching one channel and recording another.

To watch video from your Recorder again: First, press the TiVo button so that the Recorder displays TiVo Central®. Then press the Input, Source, or TV/Video button on your TV until you see TiVo Central.

You can also watch one channel while recording another if you have a cable box. In step 1, connect an RF Coaxial cable from your cable box to the RF In connector on the Recorder. Then, continue with step 2.

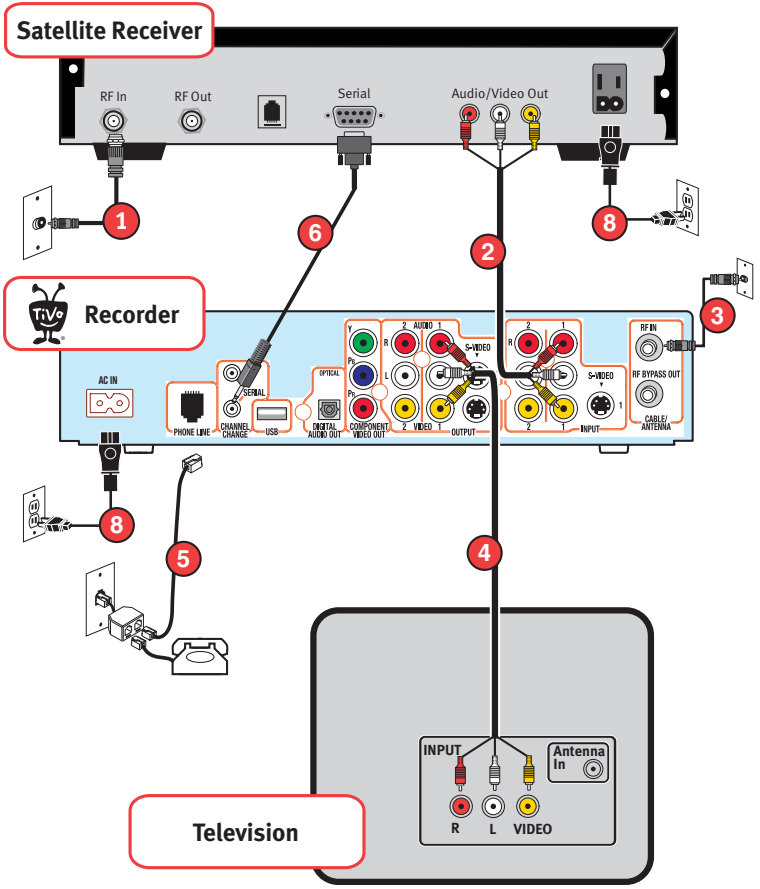
Keep in mind that the RF Coaxial cable that connects from the Recorder's RF Bypass Out to your TV carries only your basic cable channels. Also, you will not have TiVo service functionality on those channels.

Setup 4: Both a Satellite Box and an RF Program Source

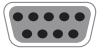
Before you begin:

- **Upgrade to TiVo Plus service is required.** Setups with more than one program source like this one are only available after upgrading to TiVo Plus service. To upgrade, visit **www.tivo.com/upgrade**.
- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables instead. See page 7.

To add a VCR or a video camera, see page 29.

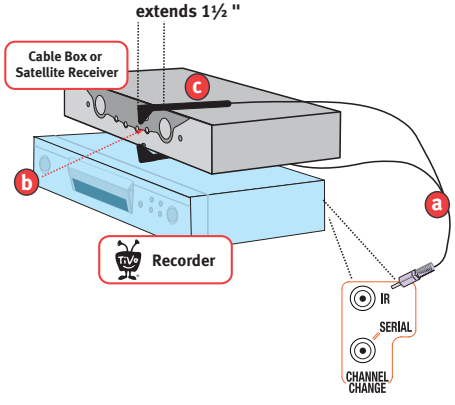


1. Make sure the satellite cable from the wall is connected to the satellite box.
2. Connect a Composite A/V cable from the **Audio/Video Output** connectors on the satellite box to the **Audio/Video Input 1** connectors on the Recorder.
3. Connect the RF Coaxial cable from the antenna or cable source to the **RF In** connector on the Recorder.
4. Connect Composite A/V cables from the **Audio/Video Output 1**connectors on the Recorder to the **Audio/Video Input** connectors on the TV.
5. Connect a phone line (see also page 8).
6. Connect the Serial Control cable. If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector, and other end into the **Channel Change/Serial** connector on the Recorder. Then skip to step 8.

   
   Data Connector

   If you don't have a Data connector, see page 9 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.
7. Connect the IR Control cable. (Skip this step if you completed step 6 above.) **(a)** Plug the purple end of the IR Control cable into the **Channel Change/IR** connector (the upper mini-jack) on the Recorder. **(b)** Locate the IR sensor (see page 9). **(c)** Mount the IR emitters. Place one emitter on top of the satellite box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
8. Plug in all power cords and turn on your TV. If you don't see the Welcome screen, you need to find the correct TV input setting. Press the Input, Source, or TV/Video button on your TV until you see the Welcome screen. For more help, see page 42.
9. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details).You must complete Guided Setup before you can play and record DVDs.

7 **IR Control cable connection**

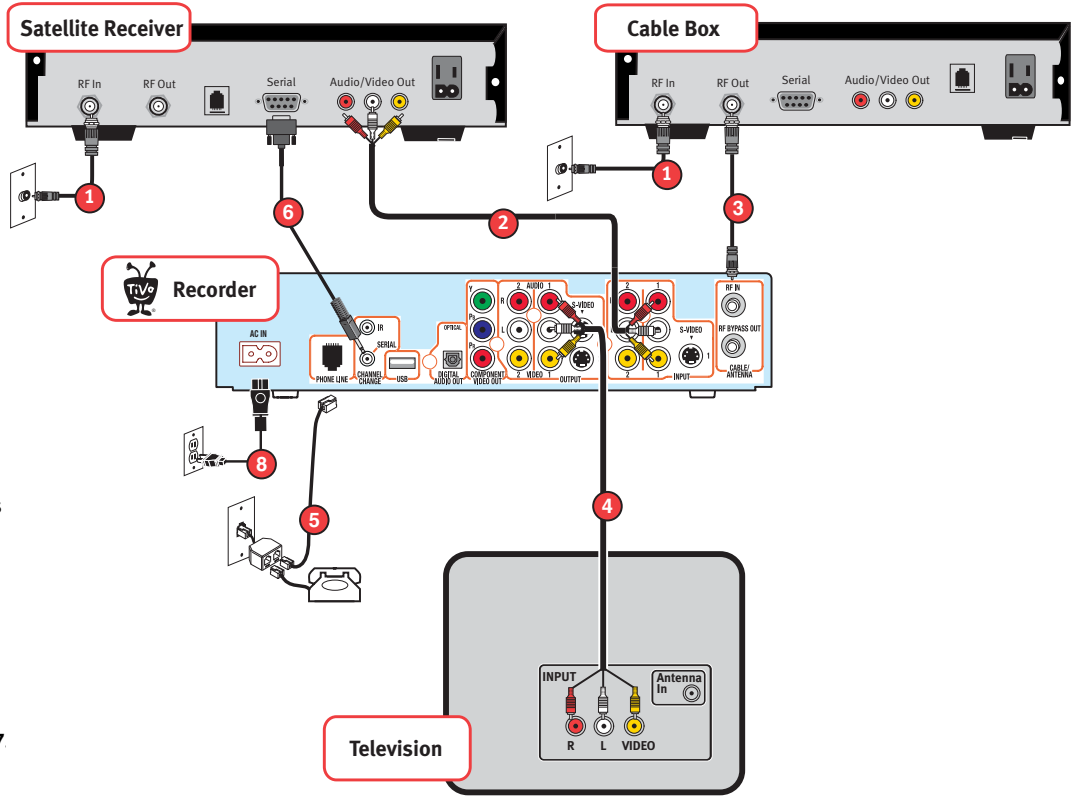


For tips on the IR Control cable connection, see page 10.

▸▸ Setup 5: Both a Cable Box and a Satellite Receiver

Before you begin:

- **Upgrade to TiVo Plus service is required.** Setups with more than one program source like this one are only available after upgrading to TiVo Plus service. To upgrade, visit **www.tivo.com/upgrade**.
- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables. See page 7



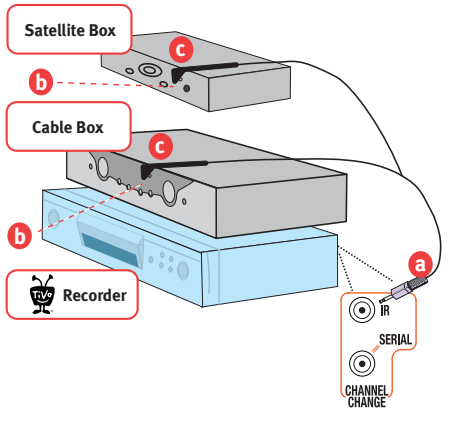
To add a VCR or a video camera, see page 29.

1. Make sure the cables from the wall are connected to your cable and satellite boxes.
2. Connect a Composite A/V cable from the **Audio/Video Output** connectors on the satellite box to the **Audio/Video Input 1** connectors on the Recorder.
3. Connect an RF Coaxial cable from the **RF Out** connector on the cable box to the **RF IN** connector on the Recorder.
4. Connect Composite A/V cables from the **Audio/Video Output 1** connectors on the Recorder to the **Audio/Video Input** connectors on the TV.
5. Connect a phone line (page 8).
6. Connect the Serial Control cable. If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector, and other end into the **Channel Change/Serial** connector on the Recorder. Then skip to step 8.

   Data Connector

   If you don't have a Data connector, see page 9 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.
7. Connect the IR Control cable. **(a)** Plug the purple end of the IR Control cable into the **Channel Change/IR** connector (the upper mini-jack) on the Recorder. **(b)** Locate your satellite and cable box's IR sensors (see page 9). **(c)** Mount the IR emitters. Place one emitter on top of the cable box. If you connected the Serial Control cable in step 6, mount the other IR emitter underneath the cable box. If you didn't connect the Serial Control cable in step 6, mount the other IR emitter on top of the satellite box. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensors. (Use the provided adhesive strips to hold the emitters in place.)
8. Plug in all power cords and turn on your TV. If you don't see the Welcome screen, you need to find the correct TV input setting. Press the Input, Source, or TV/Video button on your TV until you see the Welcome screen. For more help, see page 42.
9. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details). You must complete Guided Setup before you can play and record DVDs.

7 IR Control cable connection



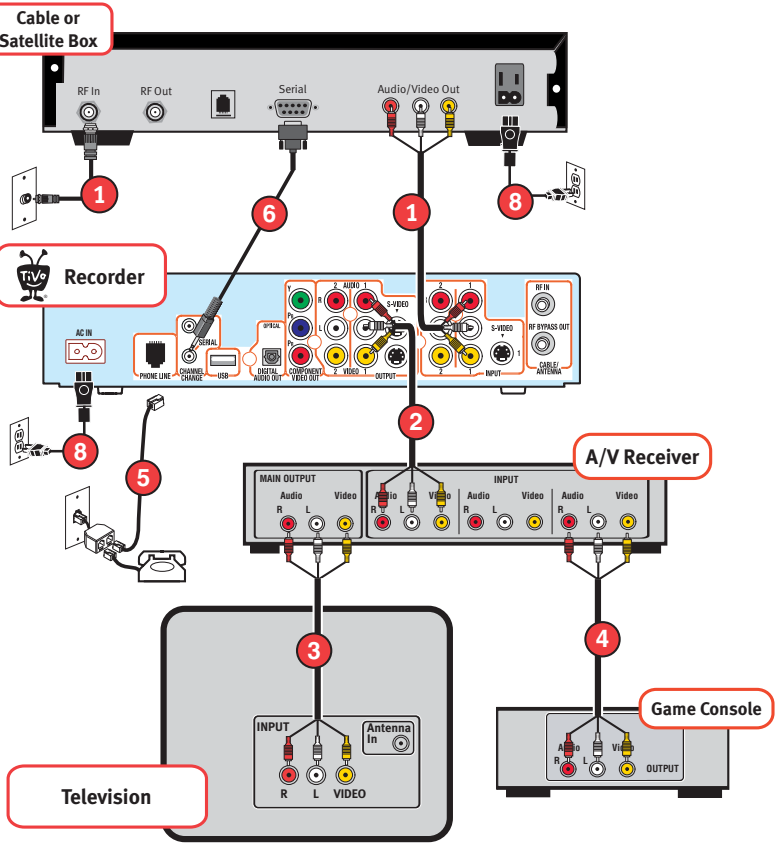
The illustration above shows both the cable and satellite box using an IR cable connection. For tips on the IR Control cable connection, see page 10.

Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the Recorder is unplugged.
- The audio/video cables shown here are for example only. For the best video signal, you may want to use Component Video cables instead. See page 7.

To add a VCR or a video camera, see page 29.

▶▶ Setup 6: Cable or Satellite Box, A/V Receiver, and Game Console

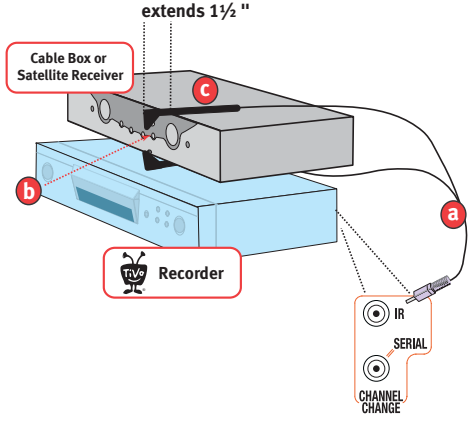


1. Cable or Satellite Box to Recorder
   Make sure the cable from the wall is connected to your cable or satellite box. Connect a Composite Video and Left/Right Audio cable from the **Audio/Video Out** connectors on the cable or satellite box to the **Audio/Video Input 1** connectors on the Recorder. (If you have cable, but don't have a cable or satellite box, connect the RF Coaxial cable currently coming from the wall to the connector labeled **RF IN** on the Recorder.)
2. Recorder to A/V Receiver
   Connect Composite A/V cables from the **Audio/Video Output 1** connectors on the Recorder to the **Audio/Video Input** connectors on the A/V receiver. If the A/V Receiver has a **Digital Audio Input**, you can connect a digital audio cable (not supplied) from the Recorder's **Digital Audio Out** to the A/V receiver.
3. A/V Receiver to TV
   Connect Composite A/V cables from the **Audio/Video Output** connectors on the A/V receiver to the **Audio/Video Input** connectors on the TV.
4. Game Console to A/V Receiver
   Connect Composite A/V cables from the **Audio/Video Output** connectors on the Game Console to the **Audio/Video Input** connectors on the A/V receiver.
5. Connect a phone line (see page 8).
6. Connect the Serial Control cable. If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector, and other end into the **Channel Change/Serial** connector on the Recorder. Then skip to step 8.

   Data Connector

   If you don't have a Data connector, see page 9 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.

7 IR Control cable connection



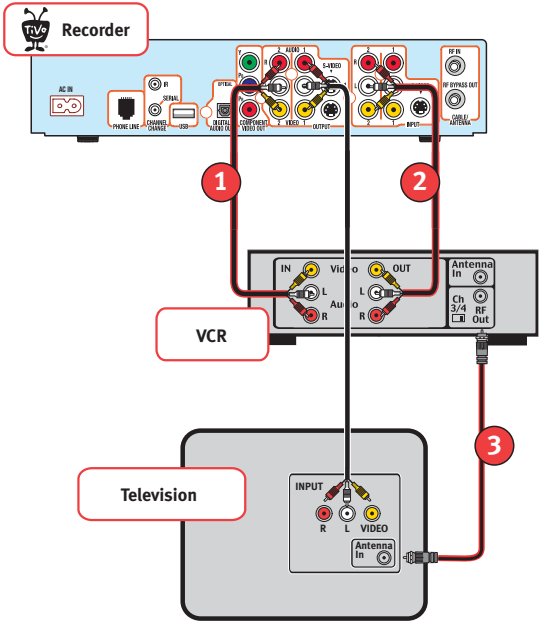
For tips on the IR Control cable connection and for alternatives to the Serial Control cable, see page 9.

7. Connect the IR Control cable. (Skip this step if you completed step 8 above.) **(a)** Plug the purple end of the IR Control cable into the **Channel Change/IR** connector (the upper mini-jack) on the Recorder. **(b)** Locate the IR sensor (see page 9). **(c)** Mount the IR emitters. Place one emitter on top of the cable box and the other on top of the satellite box. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
8. Plug in all power cords, and turn on your TV and your A/V receiver. Select the input for the Recorder. If you do not currently see the Welcome screen, you'll need to select the input for your Recorder on your A/V receiver. (See the manual that came with your A/V receiver for instructions on how to choose an input. Some A/V receivers have one Input button that cycles through the inputs. Others have multiple input buttons, one for each input.) If you still don't see the Welcome screen, press the TV/Video, Source, or Input button on your TV until you see the Welcome screen. For more help, see page 42.
9. Once you see the Welcome screen, the last step is to complete Guided Setup (see the *User's Guide* for details). You must complete Guided Setup before you can play and record DVDs

Connecting a VCR or a Video Camera

For detailed instructions on how to record from a VCR or a video camera, see Chapter 3, "Playing and Recording Programs" in the *User's Guide*. You must use **Audio/Video Input 2** on the Recorder to connect a VCR or a video camera.

To connect a VCR:



1. Connect a Composite A/V cable from the **Audio/Video Output 2** connector on the Recorder to the **Audio/Video Input** connector on the VCR. This will allow you to copy recorded programs to video tapes.
2. Connect another Composite A/V cable from the **Audio/Video Output** connector on the VCR to the **Audio/Video Input 2** connector on the Recorder. This will allow you to transfer recordings from video tapes to the Recorder (so you can turn your home videos into DVDs).
3. To watch video tapes on your VCR, connect an RF Coaxial cable from the **RF Out** connector on the VCR to the **Antenna/RF In** connector on the TV. Then press the Input, Source, or TV/Video button on your TV until you see channel numbers

Before you begin:

- **Be sure to refer to the information in Chapter 1 of this guide.**
- **This diagram only shows connections to the VCR. You must first complete one of Setups shown in this Guide before connecting a VCR or video camera.**

To connect a video camera instead of a VCR, see page 30.

displayed. Tune your TV to channel 3 or 4, depending on how you set the channel 3/4 switch on your VCR.

To connect a video camera (not shown):

1. If you don't have any device connected to the Recorder's **Audio/Video Input 2**, skip to the next step. If you normally have a VCR connected to the **Audio/Video Input 2** connector, you will have to disconnect it temporarily. Remove the Composite A/V cable from the VCR's **Audio/Video Output**. You can use this same cable to connect your video camera, since it is already connected to the Recorder's **Audio/Video Input 2**.
2. Connect a Composite A/V cable from the **Audio/Video Output** connector on the video camera to the **Audio/Video Input 2** connector on the Recorder. This will allow you to transfer recordings from a video camera to the Recorder (so you can turn your home videos into DVDs). See Chapter 3, "Playing and Recording Programs" in the *User's Guide* for details.

CHAPTER 4

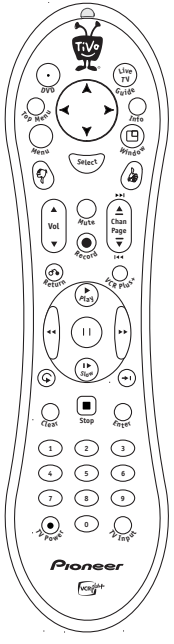
Setting Up the Remote Control

Introduction 32

Instructions: Power, Volume, Mute, TV Input 33

Managing Multiple Recorders and Remotes 37

Resetting the Programmable Buttons 38



The TV INPUT button can control the video signal—or "input"—your TV displays. Changing the input changes the source of the video displayed on your TV. TV inputs can include video from a VCR, Recorder, or a video camera.

Introduction

Before programming the remote control, you must first:

1. **Insert batteries.** See the inside front cover of the *User's Guide* for instructions.
2. **Complete Guided Setup.** See the *User's Guide* for instructions.

Using the Remote with a TV and A/V Stereo System

The remote control will already work with your Pioneer DVD Recorder with TiVo. You can also set it up to control your TV and A/V stereo system. For example:

- **Control TV power, volume, mute, and input settings:** Complete the instructions on pages 33–35 using the first column in each of the tables (TV power, volume, mute, and TV input). To control just the TV input, follow the instructions using the second column (TV input).
- **Control TV and A/V receiver power; A/V stereo system volume and mute:** Complete the instructions on pages 33–35 using the first column in each of the tables. Then repeat the instructions using the third column (A/V receiver power, volume, and mute). In this case, the TV POWER button turns on/off the TV and the A/V receiver at the same time. The VOLUME and MUTE buttons control only the A/V receiver.
- **Control TV power and A/V stereo system volume and mute:** Complete the instructions on pages 33–35 using the first column in each of the tables. Then repeat the instructions using the fourth column (A/V receiver volume and mute). The VOLUME and MUTE buttons control only the A/V receiver.

Instructions: Power, Volume, Mute, TV Input

1. **Go to the Remote Control Setup screen.** Press the TiVo button; then highlight and select Messages & Setup, then Settings, then Remote Control. Choose which device/ functions you want to control:

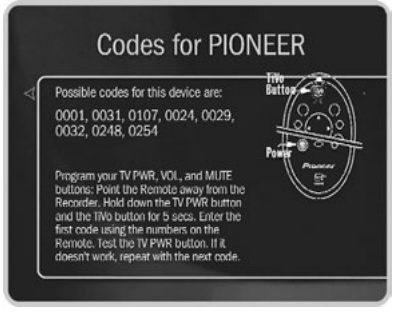
To Control:	TV power, volume, mute, and TV Input	TV input only	A/V system power	A/V system volume and mute
Choose:	Remote Control - TV (power, volume, mute)	Remote Control - TV (TV Input)	Remote Control - A/V Stereo Receiver	Remote Control - A/V Stereo Receiver

2. **Select the brand of your device.** Using the UP/DOWN arrows, highlight the brand of the device you wish to control, then press SELECT. (If you have been using a universal TV remote control, select your TV or A/V receiver's brand, not the brand of the universal remote.) Next you'll see a screen with four-digit codes.

3. **Prepare the remote control.** Point the remote away from your Recorder and cover the front end with your hand. Refer to the table below and determine which two buttons to press to prepare the remote. Press and hold the buttons simultaneously for about five seconds (until the red light at the end of the remote control lights up and stays on when you release the buttons).

To Control:	TV power, volume, mute, and TV Input	TV input only	A/V system power	A/V system volume and mute
Press the:	TV PWR and TiVo buttons	TV INPUT and TiVo buttons	TV PWR and TiVo buttons	MUTE and TiVo buttons

Remote Control Settings
Remote Control - TV (power, volume, mute)
Remote Control - TV (TV Input)
Remote Control - A/V Stereo System


Codes for PIONEER
Possible codes for this device are:
0001, 0031, 0107, 0024, 0029, 0032, 0248, 0254
Program your TV PWR, VOL, and MUTE buttons: Point the Remote away from the Recorder. Hold down the TV PWR button and the TiVo button for 5 secs. Enter the first code using the numbers on the Remote. Test the TV PWR button. If it doesn't work, repeat with the next code.
TiVo Button
Power

4. **Enter a code.** Use the number buttons on the remote control to enter a four-digit code (starting with the first code in the list on the screen). After you press the fourth digit of the code, the red light on the end of the remote control should flash. If it doesn't, try the next code.

5. **Test the code**. Point the remote towards the TV and test the button (refer to the table):

To Test the:	TV power, volume, mute, and TV Input	TV input only	A/V system power	A/V system volume and mute
Press the:	TV PWR button	TV INPUT button	TV PWR button	MUTE button

If pressing the button works (e.g., turns the TV or A/V stereo system off, or changes the TV input), the code is correct. If it does not work, repeat steps 3 and 4 using the next code on the list. If none of the codes work, perform a code search (see below).

Performing a Code Search

If none of the codes listed allow you to control your device, a code search may detect the correct code. Performing a code search can take up to 20 minutes.

1. **Prepare the remote control.** Point the remote away from your Recorder and cover the front end with your hand. Refer to the table below and determine which two buttons to press to prepare the remote. Press and hold the buttons simultaneously for about five

seconds (until the red light at the end of the remote lights up and stays on when you release the buttons).

To Control:	TV power, volume, mute, and TV Input	TV input only	A/V system power	A/V system volume and mute
Press the:	TV PWR and TiVo buttons	TV INPUT and TiVo buttons	TV PWR and TiVo buttons	MUTE and TiVo buttons

2. **Enter the search code.** Refer to the table below and use the number keys on your remote control to enter the appropriate code.

To Test:	TV power, volume, mute, and TV Input	TV input only	A/V system power	A/V system volume and mute
Enter:	0999	0999	1999	1999

After you press the fourth digit of the code, the red light on the end of the remote control will flash twice, then remain on.

3. **Test the remote control.** Point the remote control at the TV or A/V receiver. Press CHAN UP to test the first code. The test is successful if the TV or A/V receiver responds (by powering off, changing input, or muting, depending on the function you are trying to program). If there is no response, wait two or three seconds, then press CHAN UP again. Continue doing this until the TV or A/V receiver responds.

   When the TV or A/V receiver responds, press ENTER to select the current code. The red light at the end of the remote control will flash three times to indicate that the remote control is properly coded to control your device.

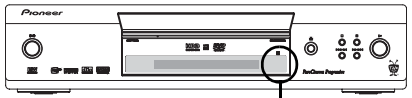
When the red light on the end of the remote control turns off, you have reached the end of the available codes.

Unfortunately, due to the great variety of TVs and A/V stereo systems, some makes and models are not compatible with your Recorder's remote control. If you reach the end of the available codes without finding a code that works with your device, you will need to use your TV or A/V stereo system's remote to turn it on and off, and control the volume.

Managing Multiple Recorders and Remotes

If you have more than one Recorder in your home, or if you have another model of TiVo DVR in addition to your Pioneer DVD Recorder with TiVo, you can match a particular Recorder with a particular remote so that each Recorder will only respond to its own remote. You can do this by setting the Remote Address.

1. If both Recorders are in the same room, start by covering the IR sensor window on one Recorder using a cloth or thick piece of paper. This will prevent setting the Remote Address on both Recorders simultaneously.

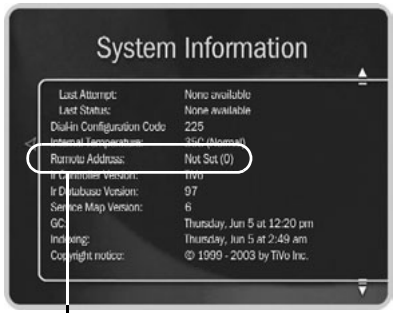


The IR sensor is located in this area.

2. Go to the System Information screen. First, press the TiVo button, then highlight and select Messages & Setup, then System Information. On the System Information screen, scroll down until you see Remote Address.
3. Hold down the PAUSE and TiVo buttons simultaneously for about five seconds (until the red light at the end of the remote control lights up and stays on when you release the buttons).
4. Use the number keys to enter any digit from 1 to 9. Press the number you have chosen several times until you see the Remote Address change on the screen.
5. Press the TiVo button to go to TiVo Central.
6. Repeat these steps using your second Recorder and remote control. Be sure to choose a different number (in Step 4) for the remote address of the second Recorder.

Once you complete this process, each remote will control only the Recorder to which it is assigned.

The default Remote Address is "0" (zero). A remote control set to Remote Address "0" will control any Recorder, and a Recorder with a Remote Address of "0" will respond to any remote, including some Pioneer A/V Receiver remote controls. When you program the remote with a new Remote Address, it will control any Recorder with that Remote Address, or with an address of "0". To ensure that your Recorder only responds to the Recorder's remote, set the Remote Address to any value other than "0" (zero).



Remote Address

▶▶ Resetting the Programmable Buttons

If you make a mistake, or are having difficulty, you can reset the programmable buttons. All the remote's buttons will return to the unprogrammed state of a new remote.

1. **Prepare the remote control.** Point the remote away from your Recorder and cover the front end with your hand.

   Press and hold the TV PWR button and TiVo button simultaneously until the red light at the end of the remote control comes on, remains steady, then stays on when you release the buttons.

2. **Press THUMBS DOWN™ three times, then press ENTER.** (To cancel, press CLEAR before you press ENTER.)

CHAPTER 5

Troubleshooting

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▶▶ Customer Support

We are dedicated to providing you with quality support and customer service. When you have a question about your Pioneer DVD Recorder with TiVo:

1. **Use this chapter.**
2. **Use the troubleshooting in the User's Guide.** It contains troubleshooting on the following topics:

   - The Recorder's Connections
   - Channels
   - Live TV
   - The TiVo Service
   - Recording Programs
   - Parental Controls
   - Audio/Video
   - Networking

3. **Use online support.** Check online customer support at *www.pioneerelectronics.com*. You'll find Frequently Asked Questions, step-by-step troubleshooting, and the ability to get interactive help from expert users.
4. **Call Customer Support.** After checking Troubleshooting and online Customer Support, call Pioneer Customer Support at 1-800-421-1404 if you need help with connecting your Recorder to other equipment, Guided Setup or connections to the TiVo service, a Recorder that does not function properly, or other questions regarding the Recorder, TiVo Basic™ service, or the remote control.

   For questions about TiVo Plus™ service, or to upgrade to TiVo Plus service, call 1-877-367-8486.

▶▶ Troubleshooting

Why does the Recorder have to be connected to a phone line?

- The Recorder needs to be connected to a phone line or to broadband Internet access to make its regular connection to the TiVo service. This connection downloads program information, which tells the Recorder when programs are scheduled to air and on what channel. It also downloads additional information from the TiVo service, such as service updates.

Do I need to connect the Recorder to a phone line to get TiVo Basic service?

- The Recorder comes with TiVo Basic service, which includes up to three days of program guide information. The Recorder needs to be connected to a phone line or to broadband Internet access to make its regular connection to the TiVo service and download updated program information, and additional information from the TiVo service.

My phone jack isn't near the Recorder.

- The Recorder comes with a 25 foot phone cord. Phone cords longer than 25 feet are readily available at most hardware or electronics stores.
- After Guided Setup, the Recorder can use a home network's shared broadband Internet connection to make its regular connections to the TiVo service. For more information, see Chapter 8, "Connecting to a Home Network," in the *User's Guide*.

Do I need to keep the phone connected all the time?

- We recommend that you leave the phone line connected all the time. It will not interfere with your other needs for the phone line, and the Recorder's regular connection to the TiVo service will keep its program information fully up to date.
- After Guided Setup, the Recorder can use a home network's shared broadband Internet connection to make its regular connections to the TiVo service. For more information, see Chapter 8, "Connecting to a Home Network," in the *User's Guide*.

What if I need to use the phone while the Recorder is connecting to the TiVo service?

- It's unlikely that you'll notice the Recorder's phone calls, because its connection to the TiVo service typically lasts only about 10 minutes and will occur during evening hours. However, if you do need to use the phone while a connection is in progress, simply pick up the phone. You will hear a sound like that of a modem dialing. Wait a few seconds, then hang up. Wait about forty-five seconds. When you pick up the phone again, the line should be free. If it is not, just pick up and hang up again. The Recorder will attempt another connection later.

I don't see the Welcome Screen when I turn on my Recorder for the first time.

- Make sure cables are connected from the OUT jack of one device to the IN jack of another. Cables should never be connected from OUT to OUT or IN to IN.
- Do not connect the Recorder to your TV using an RF Coaxial cable from the Recorder's RF BYPASS OUT jack to the TV's ANTENNA/RF IN jack. You must use either a Composite A/V cable, S-Video cable, or Component Video cable to connect your Recorder to your TV in order to see the Welcome Screen and all other Recorder screens.
- Make sure your TV is displaying the appropriate video source. You may need to use the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change video sources. If you are having trouble changing the video source, refer to the instructions that came with your TV.
- If your Recorder is connected to an A/V receiver or switch box, and you are having trouble finding the correct input, try connecting it directly to the TV instead.
- The cables you are using to connect your Recorder to your TV or other equipment may be damaged or defective. Try exchanging the cables connected to the Recorder with other cables that you know are working properly.

My Recorder remote control doesn't control my TV's power, volume, etc.

- You must first program the Recorder's remote control to turn your TV on and off and control its volume and mute functions. You can also program it to control volume and mute on an A/V receiver or stereo. For more information, see "Setting Up the Remote Control" on page 31.

My Recorder responds to my Pioneer A/V Receiver remote control.

- Some Pioneer A/V Receiver remote controls have a "DVR/VCR" button or a "VCR" button which, when pressed, may send a signal that your Recorder responds to (for example, your Recorder may go to TiVo Central). You can program your Recorder to respond only to the Recorder's remote control if you wish by setting the Remote Address. See page 37 for instructions.

My Recorder remote control doesn't work with my Recorder.

- Be sure you are using the Recorder's remote and that you hold it so that the TiVo button points toward the Recorder.
- Press any button on the remote. Does the red light at the end of the remote flash? If not, make sure that the batteries are positioned correctly in the remote. If they are correctly positioned, try a new set of batteries.
- You may not have the correct input selected on your TV. Use the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change the input. If you are using an A/V receiver, you may need to select the correct input on the A/V receiver as well.

I accidentally changed channels with my cable or satellite box's remote control.

- After you have connected the Recorder, you should use its remote control to change channels. If you use your cable or satellite box's remote to change the channel, the TiVo service won't register that the channel has changed. If you accidentally change channels with another remote, press CHAN UP or CHAN DOWN on the Recorder's remote once. The Recorder will then be able to register the channel.

I accidentally changed channels with my TV or VCR's remote control.

- If you use your TV's or VCR's remote to change the channel, the TV will no longer display the video signal from the Recorder. To return to viewing video from the Recorder, return to the channel that your TV or VCR was tuned to. You may also need to press the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change the input (i.e., the video signal your TV is displaying).

I can't get the channel to change.

If you have cable without a cable box:

- Be sure that you are using the Recorder's remote and that you hold it so that the TiVo button points toward the Recorder.
- Press any button on the remote. Does the red light above the TiVo button flash?

  If not, make sure that the batteries are positioned correctly in the remote. If they are correctly positioned, try a new set of batteries.
- You may not have the correct input selected on your TV. Use the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change the input. If you are using an A/V receiver, you may need to select the correct input on the A/V receiver as well.

If you have a cable or satellite box and used the IR Control cable:

- Make sure the cable or satellite box is turned on.
- Make sure you are using the Recorder's remote control, and that you hold it so that the TiVo button points toward the Recorder, not at the cable or satellite box.
- Refer to page 10 to verify that the IR Control cable is positioned correctly in front of the IR sensor. Also, make sure that the purple end of the cable is plugged into the **Channel Change/IR** connector on the back of the Recorder.
- You may consider optimizing the IR Control connection as described on page 10.

- Press the TiVo button to go to TiVo Central, then select Messages & Setup, then Settings, then Channels, then Channel Changing, and select “Cable Box” or “Satellite Box.” Verify the IR code you chose during Guided Setup. See page 10 for more on choosing an IR code.
- Try using the cable or satellite box’s remote to change the channel. If it doesn’t work, contact the manufacturer or service provider for assistance.

If you have a Motorola/General Instruments DCT2000 series cable box or a DIRECTV satellite box and used the Serial Control cable:

- Make sure the cable or satellite box is turned on.
- Verify that the Serial Control cable is plugged into the data connector on the cable or satellite box and into the **Channel Change/ Serial** connector on the back of the Recorder.
- Unplug the cable or satellite box from the wall, then plug it back in. Then try changing channels with the Recorder’s remote control again.
- Try using the cable or satellite box’s remote to change the channel. If it doesn’t work, contact the manufacturer or service provider for assistance.
- **Satellite Box Only:** You may have incorrectly specified the type of program guide for your DIRECTV satellite receiver during Guided Setup. There are two types of program guides: MPG (Master Program Guide) and APG (Advanced Program Guide). During Guided Setup, you select either Serial-MPG or Serial-APG to determine how your channels are changed.

  To change this option: First, unplug the power cord for the satellite receiver and plug it back in. Next, go to TiVo Central, then select Messages & Setup, then Settings, then Channels, then Channel Changing, and select “Serial cable.” If you originally selected Serial-MPG, change your selection to Serial-APG. (If you originally selected Serial-APG, change it to Serial-MPG.) You can also check the manual for your satellite receiver (as well as the satellite receiver’s system setup screen) for information on the type of DIRECTV program guide it uses.

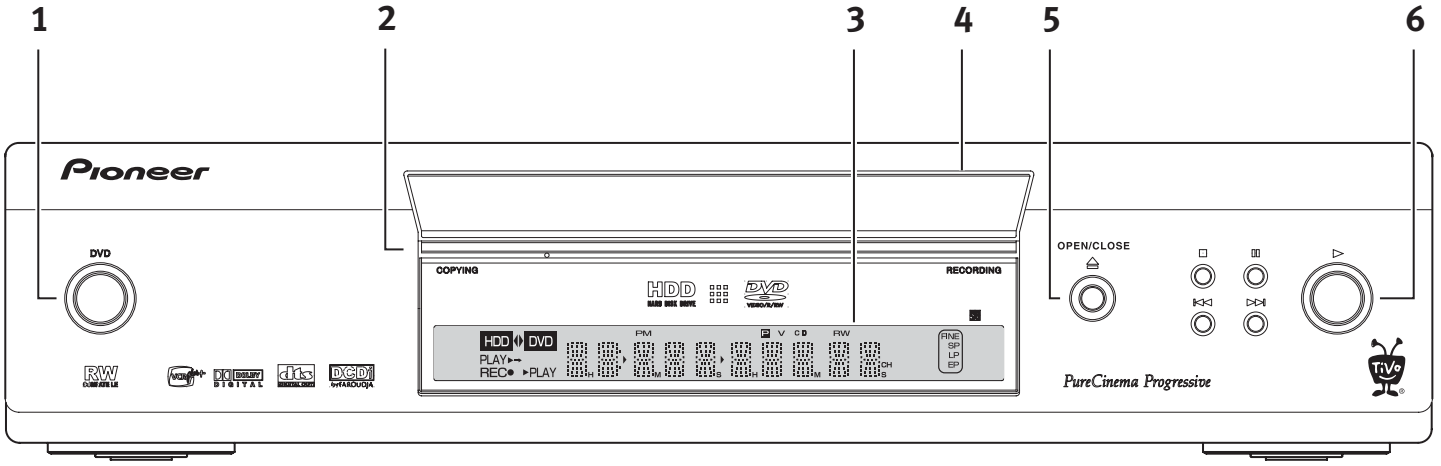
APPENDIX A

Front and Back Panel Reference

Front Panel Reference 48

Back Panel Reference 51

▶▶ Front Panel Reference

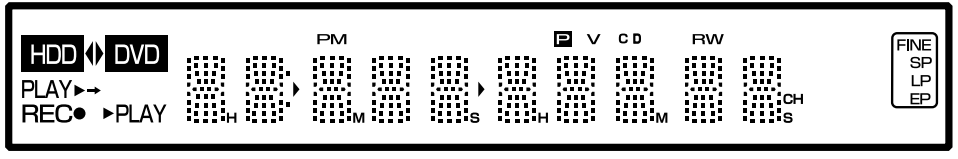


1 — DVD Button: Press this to go to the DVD screen.

2 — Light Strip: There are three lights (LEDs) under this clear plastic strip.

- The orange “copy” light on the left comes on when the Recorder is copying a program to a DVD.
- The blue “play” light in the middle comes on when the Recorder is playing a recording from Now Playing or a DVD, or CD.
- The red “record” light on the right comes on when the Recorder is recording a program to Now Playing.

3 — Status Display: The following illustration shows the placement of lights in the status display. The display in this area changes to reflect the current state of the Recorder.



For example, when you first turn on power for the Recorder, you see a “Power On” message in the center of the display; and when the Recorder is displaying a TiVo screen, such as TiVo Central, you see the word “TiVo.” In addition, this area reflects input from the remote control when you use features such as searching for a title or a chapter of a DVD.

Other useful messages:

- When playing a CD, an “S” appears for shuffle mode, an “R” for repeat. In repeat mode “DSC” or “TRK” also appear, depending on whether the whole disc will repeat or only a single track.
- While copying a program from Now Playing to a DVD, the percent complete displays.
- While watching a recording from Now Playing, the display shows how far into the recording you are. (E.g., “1 07 00” means you have watched one hour and seven minutes of the recording.)
- While watching live TV, the channel number appears on the right side, near the symbol “CH.”
- When progressive mode is on, a “P” appears at the top of the display area.

- While recording a program to Now Playing, the recording's video quality shows on the right side of the display: "Extreme (Fine)"; SP for "High (SP)"; LP for "Medium (LP)"; EP for "Basic (EP)."
- If a disc is in the tray, a symbol for the kind of disc appears at the top of the display: RW for DVD-RW; R for DVD-R; V for a video DVD; CD for a CD.

4 — Disc Tray: Opens and closes when you press the EJECT button on the front panel of the Recorder.

5 — EJECT Button (⏏): Press to open or close the disc tray.

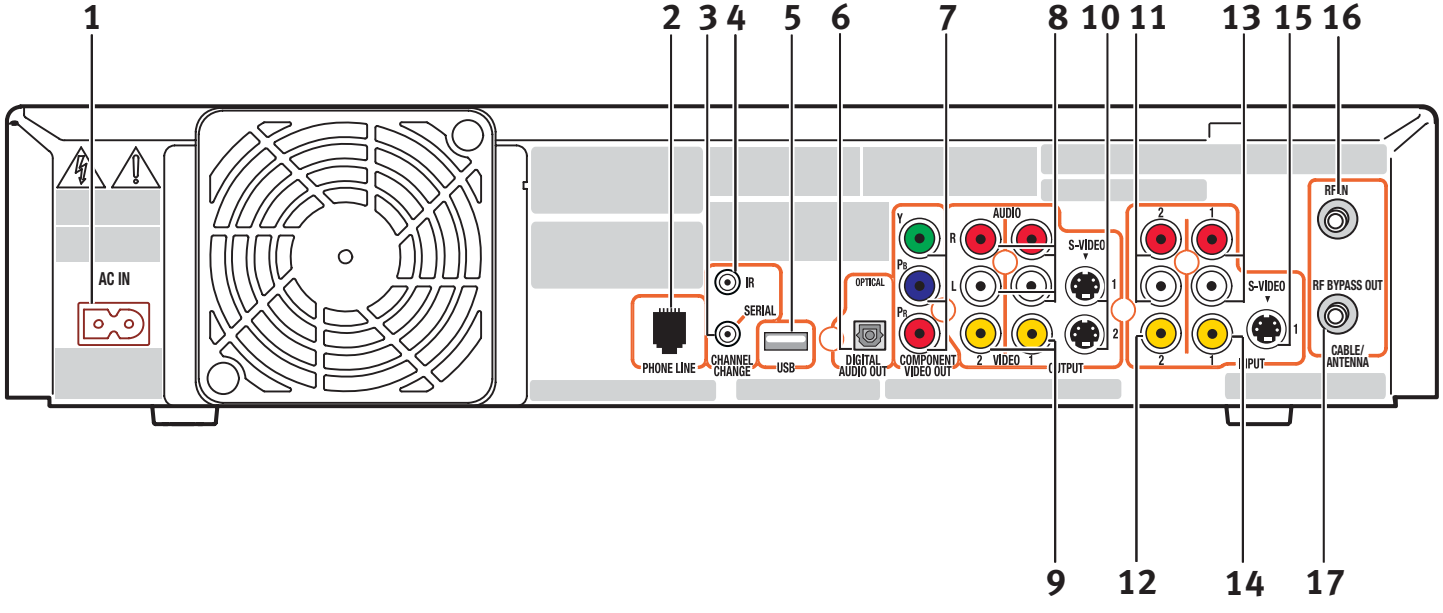
6 — Control Buttons: These buttons work just like the buttons on the Recorder's remote control (see the inside front cover for more information). They include:

- STOP (■)
- PAUSE (❚❚)
- PLAY (▶)
- SKIP FWD (▶▶❙)
- SKIP BACK (❙◀◀)

Back Panel Reference

This section provides general information about the connections on the back panel of the Pioneer DVD Recorder with TiVo.

Remember, always connect cables from the OUT connector of one device to the IN connector of the next. Never connect an IN to an IN or an OUT to an OUT.



A

1 — AC ~ In: (Connects to A/C power.) The Recorder does not use a separate on and off switch; plugging it into the wall socket switches it on.

2 — Phone Line: (Connects to phone line.) The Recorder uses the phone line to get program listings and to communicate with the TiVo service. If you already have a phone line connected to your cable box, use the provided splitter.

3 — Channel Change/Serial: (Connects to cable or satellite box; a Serial/Data connector is not available on all cable or satellite boxes.) This connection enables the Recorder to change channels on a cable or satellite box.

4 — Channel Change/IR: (Connects to cable or satellite box; IR stands for *infrared.*) This connection enables the Recorder to change channels on your cable or satellite box. The purple end of the IR Control cable plugs into the Recorder. The two emitters on the other end of the cable are placed in front of the IR sensor on the cable and/or satellite box.

5 — USB: (Universal Serial Bus.) Use with a USB network adapter (not included) to connect to a home network, then use a network's shared Internet connection to connect to the TiVo service. Use the connection to a home network to take advantage of the TiVo Home Media Option premium feature package (sold separately). For more information on using a broadband Internet connection, see Chapter 8, "Connecting to a Home Network," in the *User's Guide*; for more information on Home Media Option, see Chapter 7, "Home Media Option," in the *User's Guide*.

6 — Optical Digital Audio Output: (Connects to A/V receiver.) Use the optical digital audio output jack to connect the Recorder to an A/V receiver with optical digital audio input. To do so, you need an Optical Digital Audio cable (not supplied). The Recorder supports the Dolby Digital and DTS (Digital Theater Systems) digital audio formats. Ordinarily, the Recorder produces tones to indicate when certain buttons on the remote

control are pressed. If you use optical digital audio output, you may not hear these tones. You must also establish a video connection using either an S-Video cable, the yellow plug on a Composite A/V cable, or a Component Video cable.

7 — Component Video Output: (Connects to TV.) Component video provides the highest picture quality. You must also establish an audio connection using either the white and red plugs on a Composite A/V cable, or an Optical Digital Audio cable.

8 — Composite Audio Outputs: (Connects to TV.) For composite audio out, connect the white and red plugs on a Composite A/V cable to either the red and white outputs labeled "1" or the red and white outputs labeled "2." You must also establish a video connection using either an S-Video cable, the yellow plug on a Composite A/V cable, or a Component Video cable.

9— Composite Video Outputs: (Connects to TV.) Composite video provides a picture with very good quality. You must also establish an audio connection using either the white and red plugs on a Composite A/V cable, or an Optical Digital Audio cable.

10—S-Video Outputs: (Connects to TV.) S-Video provides a higher quality picture than composite. You must also establish an audio connection using either the white and red plugs on a Composite A/V cable, or an Optical Digital Audio cable.

11 — Composite Audio Input 2: (Connects to VCR or video camera.) Plug in the red and white ends of a Composite A/V cable to make an audio connection. You must also establish a video connection using the yellow end on a Composite A/V cable.

12 — Composite Video Input 2: (Connects to VCR or video camera.) Plug in the yellow end of a Composite A/V cable to make a video connection. You must also establish an audio connection using the red and white ends of a Composite A/V cable.

13 — Composite Audio Input 1: (Connects to satellite or cable box.) Plug in the red and white ends of a Composite A/V cable to make an audio connection. You must also establish a video connection using either an S-Video cable or the yellow end of a Composite A/V cable.

14 — Composite Video Input 1: (Connects to satellite or cable box.) Plug in the yellow end of a Composite A/V cable to make a composite video connection. You must also establish an audio connection using the red and white ends of a Composite A/V cable.

15 — S-Video Input: (Connects to satellite or cable box. An S-Video connector is not available on all satellite or cable boxes.) You must also establish an audio connection using the red and white ends of a Composite A/V cable.

16 — RF In: (Connects to a satellite or cable box, to cable without a box, or to antenna.) Use this connector if you are using an RF Coaxial cable to connect the cable box (or cable from the wall) to the Recorder.

17 — RF Bypass Out: (Connects to TV.) Any audio/video signal passed to the Recorder through the RF In connector passes out of the Recorder through this connector. Features of the TiVo service such as recording and control of live TV are not available on a signal from this connector.

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Specifications

Video In:	S-Video 4-pin mini DIN Composite Video RCA (2 pairs)
Video Out:	S-Video 4-pin mini DIN (2 pairs) Composite Video RCA (2 pairs) Component Video RCA
Audio Line In:	Stereo L/R RCA (2 pairs)
Audio Line Out:	Stereo L/R RCA (2 pairs) Digital Audio (Optical)
RF In:	F-Connector Female
RF Bypass Out:	F-Connector Female
Expansion Port:	USB
Telephone:	RJ-11 female, 2-wire
Control Change:	3.5mm mini jack sockets (2 pairs)
Power:	AC 120V 60Hz
Power consumption:	49 Watts
Ambient (external) Operating Temperature:	5C to 35C
Operating Humidity:	85% or less
Dimensions:	420mm W x 94mm H x 391mm D
Remote Control:	39 Buttons
Storage:	ATA/IDE Hard Drive

Actual recording capacity depends on signal quality and the type of programming being recorded.

We are dedicated to providing you with quality support and customer service. If you have questions or difficulties, we would like to hear from you.

TROUBLESHOOTING

Check the Troubleshooting section of this document and of the *User's Guide* that came with your Recorder.

CONTACT CUSTOMER SUPPORT

Should this Recorder require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

1-800-421-1404

Please do not ship your Recorder to Pioneer without first calling the Customer Support Division at the above listed number for assistance.

Pioneer Electronics (USA) Inc.
Customer Support Division
P.O. BOX 1760, Long Beach
CA 90810-1760, U.S.A.

To upgrade to TiVo Plus™ service, visit *www.tivo.com/upgrade*. For questions about TiVo Plus service, visit *www.tivo.com/support*.

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